

Remarks/Arguments

This document is a response to a non-final office action that was mailed on April 27, 2006. This response includes amendments to pending independent claims 1, 28, 42, 60 and 61.

The Examiner states that claims 1, 8, 9, 12, 28-30, 36, 42 and 61 are rejected under 35 U.S.C. §102(e) as being anticipated by Nordenstam et al. (U.S. 6,711,263) (hereafter '263). Each of the amended claims 1, 28, 42 and 61 now recite, in part, a signal having an effective transmitting range of less than or equal to one meter like that language recited within currently and previously pending dependent claim 5.

With respect to the Applicant's previously pending claim 5, which recites in part "wherein the RF signal has an effective range of less than or equal to a meter", the Examiner cites and quotes from Nysen, in part, "a maximum signal strength of 1.0 at 5 feet from the antenna" and "to discriminate between a desired signal 15 feet from the reader, and an unwanted signal... at least 25 feet away" (underline added) (Column 34, Line 42 through column 35, Line 13).

As quoted from Nysen, the RFID tag of Nysen has an effective range of at least 15 feet and not 1 meter as claimed by the Applicant. Furthermore, the Nysen signal range is designed for an entirely different purpose than that of the Applicant's claimed invention. The Applicant's signal range of 1 meter is designed for secure transmission of a signal communicating an encryption key to an electronic terminal. Conversely, the Nysen signal range is designed for discrimination of an RFID interrogation signal among other unwanted signals.

The Applicant's claimed invention involves subject matter relating to the secure transmission of an encryption key to an electronic terminal. The Nysen ('671) reference describes subject matter relating to an RF-ID tag reader. The Applicant's specification does not describe an RFID tag reader and does not appear to include a recitation to anything resembling an RFID tag or RFID tag reader. The Nysen ('671) reference does not describe distribution of an encryption key, and further does not appear to include a recitation of

anything resembling an "encryption key". Consequently, the subject matter of Nysen ('671) does not appear applicable to the subject matter of the Applicant's claimed invention.

Referring to Nordenstam ('263), Nordenstam fails to teach or suggest transmission of "a signal having an effective range of less than or equal to one meter". In fact, Nordenstam does not appear to employ any sort of limited signal transmitting range for any purpose. Nordenstam describes transmission of an encryption key and appears to employ encryption of the encryption key to provide for added security of the transmission of the encryption key. The Applicant's specification describes transmission of an encryption key and employs a limited signal transmitting range, limited power level, limited direction and angular range and polarity to provide for added security of the transmission of the encryption key. The Applicant and Nordenstam take entirely different approaches to provide security for transmission of an encryption key.

For the reasons described above, as amended, independent claims 1, 28, 42 and 61 distinguish over the cited art of record. As a matter of law, claims 2-16, 29-38, 43-48 which depend directly or indirectly from independent claims 1, 28 and 42, also distinguish over the cited art of record. Accordingly, the Applicant respectfully requests that the Examiner allow claims 1-16, 28-38, 42-48 and 61.

The Examiner states that claims 10-11 and 37-38 are rejected under 35 U.S.C. §103(a) as being unpatentable over '263 (Nordenstam) in view of Carloganu et al. (U.S. 6,226,749).

The Applicants claims 10 and 37, recite in part, "transmitting a test encryption key from the keying device to the electronic terminal". In support of claim 10, the Applicant's specification recites " Portable device 100 transmits a test encryption key that it believes is currently being stored in key memory 214. If the test encryption key matches the current encryption key, terminal 200 transmits an acknowledgment signal. If the keys do not match, the installation procedure is aborted." (underline added) (Page 8, Lines 23-27).

With respect to Carloganu ('749), the Examiner quotes the Carloganu specification by stating in part "Preferably, the secured command format includes a message authentication code signature value calculated using an encryption key and at least a portion of the content of the secured command. Command authentication testing is carried out by first calculating a

test message authentication code signature value using one of the same or a paired encryption key stored in the security module and the same portion of the content of the secured command received by the security module. Following this, the message authentication code signature value in the secured command is checked to determine if it matches the test message authentication code signature value. If it matches, the command is authenticated; and if not, the command is declared to be faulty.” (col. 4, lines 16-29).

Carloganu ('749) does not transmit a test encryption key as claimed by the Applicant. Instead, it calculates a test message authentication code and checks for a match with another calculation of the test message authentication code. Consequently, the subject matter of Carloganu ('749) does not appear to be applicable to the subject matter of the Applicant's claims 10 and 37.

For the reasons described above, claims 10 and 37 distinguish over the cited art of record. As a matter of law, claims 11 and 38 which respectively depend directly from claims 10 and 37, also distinguish over the cited art of record. Accordingly, the Applicant respectfully requests that the Examiner allow claims 10-11 and 37-38.

The Examiner states that claims 2-7, 31-35, 43-48 and 60 are rejected under 35 U.S.C. §103(a) as being unpatentable over '263 (Nordenstam) in view of Nysen et al. (U.S. 6,433,671).

For the reasons described above, as amended, independent claims 1, 28, 42 and 61 distinguish over the cited art of record. As a matter of law, claims 2-16, 29-38, 43-48 which depend directly or indirectly from independent claims 1, 28 and 42, also distinguish over the cited art of record. Accordingly, the Applicant respectfully requests that the Examiner allow claims 1-16, 28-38, 42-48 and 61.

With respect to claim 60, according to the **MPEP 2143**, three basic criteria must be met to establish a *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or

suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Also, the **MPEP 2143** states, the examiner's proposed combination cannot render the cited prior art unsatisfactory for its intended purpose. This portion of the MPEP also states that a proposed modification cannot change the principle of operation of a reference. The Examiner's proposed combination of references changes the principles of operation for the base reference.

The Applicant's claim 60 has been amended to recite, in part, "including: transmission of an RF signal at a predetermined power level of less than or equal to 1mW, and transmission of said RF signal in a direction that resides within an angular range of plus or minus 15 degrees or less of a predetermined direction, and the transmission of said RF signal having a predetermined polarity" (underline added).

The Nordenstam ('263) reference describes subject matter relating to the secure distribution of an encryption key. The Nysen ('671) reference describes subject matter relating to an RF-ID tag reader. The Nordenstam ('263) reference does not describe an RFID tag reader and does not appear to include a recitation to anything resembling an RFID tag or tag reader. The Nysen ('671) reference and does not describe distribution of an encryption key, and further does not appear to include a recitation of anything resembling an "encryption key".

Consequently, there appears to be no suggestion or motivation within the Nordenstam ('263) reference to combine it with the Nysen ('671) reference, and there appears to be no suggestion or motivation within the Nysen ('671) reference to combine it with the Nordenstam ('263) reference.

Furthermore, a hypothetical combination of the subject matter of the Nordenstam ('263) reference and the subject matter of the Nysen ('671) reference would not teach or suggest all of the claim limitations recited within claim 60.

For example, the claim 60 limitation "said pre-determined format including at least one of: transmission of an RF signal at a predetermined power level of less than or equal to

1mW" (underline added) is not taught by either the Nysen ('671) reference nor the Nordenstam ('263) reference.

With respect to the aforementioned claim 60 limitation, the Examiner refers to a portion of the Nysen ('671) reference that states "It is also an object of the invention to provide a method for interrogating a backscatter generating tag, comprising the steps of (a) generating an interrogation signal having a frequency within an interrogation band; (b) emitting the interrogation signal as a radio wave signal; (interacting the emitted radio wave signal with a backscatter generating tag; (receiving a radio frequency backscatter signal from the tag" in col. 8, lines 53-67."

The "interrogation signal having a frequency within an interrogation band", "emitting the interrogation signal as a radio wave signal" for the purpose of "interacting the emitted radio wave signal with a backscatter generating tag" does not constitute transmission of an RF signal at a predetermined power level of less than or equal to 1mW".

The power of Nysen's ('671) interrogation signal is not described as being restricted to being below or above or equal to 1mW. In fact, Nysen ('671) is silent with respect to power attributes of the Nysen interrogation signal.

The purpose of the Applicant's claimed RF signal being limited to less than or equal to 1 mW of power is to enhance signal transmission security of a signal communicating an encryption key, and not for the purpose of interrogating a tag or other object. Further, the Applicant's RF signal does not necessarily have a particular frequency within a particular frequency (interrogation) band.

The purpose of the aforementioned claim limitation "transmission of an RF signal in a direction that resides within an angular range of plus or minus 15 degrees or less of a predetermined direction" and "transmission of an RF signal having a predetermined polarity (underline added) is also to provide security of a signal communicating an encryption key.

With respect to an angular range, both Nordenstam and Nysen are silent. With respect to polarity, Nysen states that "When the reference signal is one polarity, the modulated backscattered signal passes directly through the mixer. When the reference signal is of the opposite polarity, the modulated backscattered signal is inverted".

Nysen employs polarity to process a backscattered RFID signal, either by passing the backscattered signal through a mixer or alternatively, for inverting the backscattered signal. Nysen does not employ polarity for a purpose of security, nor for installing an encryption key into an electronic terminal, as claimed by the Applicant.

With further respect to the Applicant's claim 2, which recites in part "wherein the communications unit includes a low power-close proximity RF transceiver", The Examiner also states "It would have been obvious...to modify the teachings of the '263 a method of distributing keys to include a means for the portable keying device to utilize a RF-ID tag that is compatible with existing methods".

The Applicant's claimed invention does not utilize an RF-ID tag or anything like an RF-ID tag. An RFID tag is designed to respond to an interrogation signal and does not transmit an encryption key. The Applicant's claimed keying device is designed to transmit an encryption key and does not respond to an interrogation signal.

The Nysen ('671) reference does not appear to be applicable to the Applicant's claimed invention. Accordingly, claim 2 further distinguishes over the cited art and the Applicant respectfully requests that the Examiner allow claim 2.

As a matter of law, because claims 3-7 depend directly or indirectly from claim 2, because the cited art does not render the subject matter of parent claim 2 unpatentable, the cited art cannot render unpatentable the subject matter of claims 3-7 which depend directly or indirectly from claim 2.

Further, with respect to the Applicant's claim 4, which recites in part "wherein the predetermined power level is less than or equal to 1 mW", the Examiner refers to the Nysen ('671) reference at Column 14, Lines 1-10 and quotes in part, "In one embodiment, the voltage controlled oscillator 10 is controlled to produce a sinusoidal RF".

The Applicant asserts that a voltage controlled oscillator is designed to directly control the frequency and not the power of a signal. Furthermore, the Applicant's the power level of the Applicant's signal that communicates an encryption key is intended to be limited and not varied via a controlling voltage.

The Applicant's claims 2-7, 32-34, 43-48 and 60 all recite, at least in part, attributes of a signal encoding an encryption key. These signal attributes of the Applicant's claimed

invention, such as signal power, direction, angular range and polarity, are controlled for purposes entirely different than those associated with the operation of a RFID tag. The purpose of the Applicant's claimed invention is to initiate transmission of an encryption key in a manner where security is a high priority. The purpose of Nysen's RFID tag is to transmit a signal in response to receiving a signal in a manner where signal discrimination, and not security, is a high priority.

Consequently, the Nysen reference does not teach the signal attribute related limitations of the Applicant's claimed invention and a hypothetical combination of the subject matter of the Nordenstam ('263) reference and the subject matter of the Nysen ('671) reference would not teach or suggest all of the claim limitations recited within the Applicants claims 2-7, 31-35, 43-48 and 60.

The Examiner states that claims 13-17 are rejected under 35 U.S.C. §103(a) as being unpatentable over '263 (Nordenstam) in view of Tuttle et al. (U.S. 6,078,791).

Claim 17 has been cancelled and is no longer pending. For the reasons described above, claim 1 distinguishes over the cited art of record. As a matter of law, claims 13-16 which depend indirectly from claim 1, also distinguishes over the cited art of record. Accordingly, the Applicant respectfully requests that the Examiner allow claims 13-16.

As a matter of law, because independent claims distinguish over the cited art, claims 2-16, 29-38 and 43-48 which depend from the independent claims, also distinguish over the cited art. Accordingly, the Applicant respectfully requests that the Examiner allow claims 1-16, 28-38, 42-48 and 60-61.

Conclusion

For the reasons explained above, all pending claims distinguish over the cited art of record. Because all independent claims distinguish over the cited art of record, claims 2-16, 29-38 and 43-48 which depend from all of the independent claims 1, 28, 42, 60 and 61, also distinguish over the cited art. Accordingly, the Applicant respectfully requests that the Examiner allow all pending claims 1-16, 28-38, 42-48 and 60-61.

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The Director is hereby authorized to charge any fees associated with this communication or credit any overpayment to Deposit Account No. 50-0289.

Respectfully submitted,

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